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## Muckenhoupt Hamiltonians, triangular factorization, and Krein orthogonal entire functions

### Abstract

According to classical results by M. G. Krein and L. de Branges, for every positive measure  $\mu$  on the real line  $\mathbb{R}$  such that  $\int_{\mathbb{R}} \frac{d\mu(t)}{1+t^2} < \infty$  there exists a Hamiltonian  $H$  such that  $\mu$  is the spectral measure for the corresponding canonical Hamiltonian system  $JX' = zHX$ . In the case where  $\mu$  is an even measure from Steklov class on  $\mathbb{R}$ , we show that the Hamiltonian  $H$  normalized by  $\det H = 1$  belongs to the classical Muckenhoupt class  $A_2$ . Applications of this result to triangular factorizations of Wiener-Hopf operators and Krein orthogonal entire functions will be also discussed.

Talk time: 2016-07-18 15:30— 2016-07-18 15:50

Talk location: Cupples I Room 115

Session: Operator theory, singular integral equations, and PDEs. Organized by R. Duduchava, E. Shargorodsky, and J. Lang